National Taiwan Ocean University

0809-Department of Optoelectronics and Materials Technology (For the academic year 2024; Admission Status: International Students)

Subject category	Subject name	Credit points	Cross-disciplinary subjects	First academic year		Second academic year		Third academic year		Fourth academic year		Fifth academic year		Remarks
				F	S	F	S	F	S	F	S	F	S	
General education courses	Swimming Graduation Requirements B92A12P5	0	Unlimited					0						
	12-Chinese	4	Unlimited	2	2									Different course numbers require completing the necessary credits.
	English B9B01968、B9B01969	4	Unlimited	2	2									According to the 'National Taiwan Ocean University General Education Curriculum Guidelines,' the English credit exemption regulations are:
	38-Advanced English	2	Unlimited			2								
	Introduction to Artificial Intelligence B9M01024	2	Unlimited	2										Core liberal arts courses are recognized under the 'Technology and Society' domain.
	Introduction to Oceanography B9M01Z64	2	Unlimited		2									
	11- Liberal arts courses	14	Unlimited											1. This field of study includes four subfields: Humanities Exploration, Social Dynamics, Technological Innovation, and Interdisciplinary Sustainability. At least 2 credits must be earned in Interdisciplinary Sustainability, and up to 4 credits can be recognized in each of the other subfields. 2. The required liberal arts courses for first-year students include "Introduction to Ocean

														Science" (2 credits) and "Introduction to Artificial Intelligence" (2 credits).
	19- Physical education courses	0	Unlimited	0	0	0	0							Must complete four semesters of zero-credit required courses, including at least one semester of swimming. However, those who meet the university's 'Student Exemption from Swimming Course Regulations' are exempt from swimming but must take another physical education course.
	Service-Learning Program-Campus Service B8911NNU	0	Unlimited	0										
	English Graduation Requirements B9D03TVS	0	Unlimited					0						
Subtotal of general education course credits		28		6	6	6	4	4	2	0	0	0	0	
Required courses	General Physics B8911L66、B8921L66	6	Unlimited	3	3									
	General Physics Lab. B8911L67、B8921L67	2	Unlimited	1	1									
	General Chemistry(I) B8901L6L	2	Unlimited	2										
	General Chemistry Lab.(I) B8901L6M	1	Unlimited	1										
	Calculus B8911M97、B8921M97	6	Unlimited	3	3									

	Introduction to Materials Science (I) B890126M	3	Unlimited	3										
	Fundamentals of Electro-optics B890126J	3	Unlimited		3									
	Introduction to Materials Science (II) B8901IMS	3	Unlimited		3									
	Introduction to Computer Science and Programming B89012D1	3	Unlimited		3									
	Engineering Mathematics(I) B890208A	3	Unlimited			3								
	Engineering Mathematics(II) B89022Q4	3	Unlimited				3							
	Electromagnetics (I) B89022CK	3	Unlimited			3								
	Electromagnetics (II) B89032HT	3	Unlimited				3							
	Applied Electronics(I) B89022HJ	3	Unlimited			3								
	Applied Electronics Lab.(I) B89022HK	1	Unlimited			1								
	Introduction to Crystal Structure and X-ray Diffraction of Materials B89022Q5	3	Unlimited				3							
	Thermodynamics of Materials(I) B89022HL	3	Unlimited			3								

	Optics B89022A1	3	Unlimited				3							Content includes an introduction to geometric optics and basic wave optics (interference, diffraction).
	Photonics B89022Q6	3	Unlimited					3						
	Optoelectronics and Materials Laboratory (I) B89022FD	1	Unlimited				1							3 hours of laboratory work.
	Optoelectronics and Materials Laboratory (II) B89032US	1	Unlimited					1						3 hours of laboratory work.
	Modern Physics B8903850	3	Unlimited					3						
Subtotal of required courses credits		62		13	16	13	13	7	0	0	0	0	0	
Total credits		90		19	22	19	17	11	2	0	0	0	0	
Total required credits		90												
Minimum elective credits		44												
Minimum graduation credits		134												
Note on minimum elective credits		1. The department recognizes all courses offered by the Institute of Photonic Sciences and the Institute of Materials Engineering at this university. 2. For elective credits, students in this department may take no more than 16 credits from courses outside the department, including those from the Bachelor's programs in Photonics and Materials, the Institute of Photonic Sciences, and the Institute of Materials Engineering. Of these, no more than 9 credits may be from courses outside the College of Electrical Engineering and Computer Science or the College of Engineering. 3. Credits for "General Education Courses," "Military Training," and "Physical Education" are not counted towards elective credits. 4. Students pursuing a double major in this department must complete all required courses and credits for the department according to university regulations.											
Note on minimum graduation credits		5. For students from other departments who choose this department as a minor, the required professional courses and credits are as follows, with a minimum of 21 credits required: Introduction to Photonic Technology (3 credits), Introduction to Materials Science (I) (3 credits), Introduction to Crystal Structures and X-ray Diffraction (3 credits), Thermodynamics of Materials (I) (3 credits), Optics (3 credits), Photonics (3 credits), and Introduction to Materials Science (II) (3 credits).											

	6. For students specializing in Photonic Semiconductor Materials Technology, the required courses are: Introduction to Materials Science (I) (3 credits), Introduction to Photonic Technology (3 credits), Liquid Crystal Displays (2 or 3 credits), and Semiconductor Processing Technology (3 credits). 7. The recommended core elective courses are: Optical System Design, Introduction to Electron Microscopy, and Materials Analysis Techniques.
Remarks	